

Updates on Certification System for Telecommunication Terminals in Japan

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Today's topics

1. Overview of certification system of telecommunication terminals
2. Laws and ministerial orders on certification system of telecommunication terminals
3. Technical standards on telecommunication terminal devices
4. Market surveillance on terminal devices
5. Technical standards on emergency notification are not appropriate

1. Overview of certification system of telecommunication terminals

Certification system on telecommunication terminals (1)

- Certification system is a system that should be used by choice by the user who checks the display if it is a display that is certified.
- Under the Telecommunication Business Act, certification system based on the three rules was certified as a technical standard on connecting terminals.

Technical standards on connection to terminals of the Telecommunication Business Act (Telecommunication Business Act Article 52, Regulations on Terminals)

【General rules】

- ⇒ **Prevent damages and functional problems** on telecommunication lines
- ⇒ **Prevent problems** from other users
- ⇒ **Clarify where responsibilities end** at telecommunication lines



Certification system on telecommunication terminals (2)

- In design certification by a registered certification body, registered certification body certifies whether a device design is compatible with the technical standards, and certification vendor gets the terminal device to satisfy the technical standards by building a terminal device to match the design.

Method to check satisfaction of technical standards

(Certification by each device)

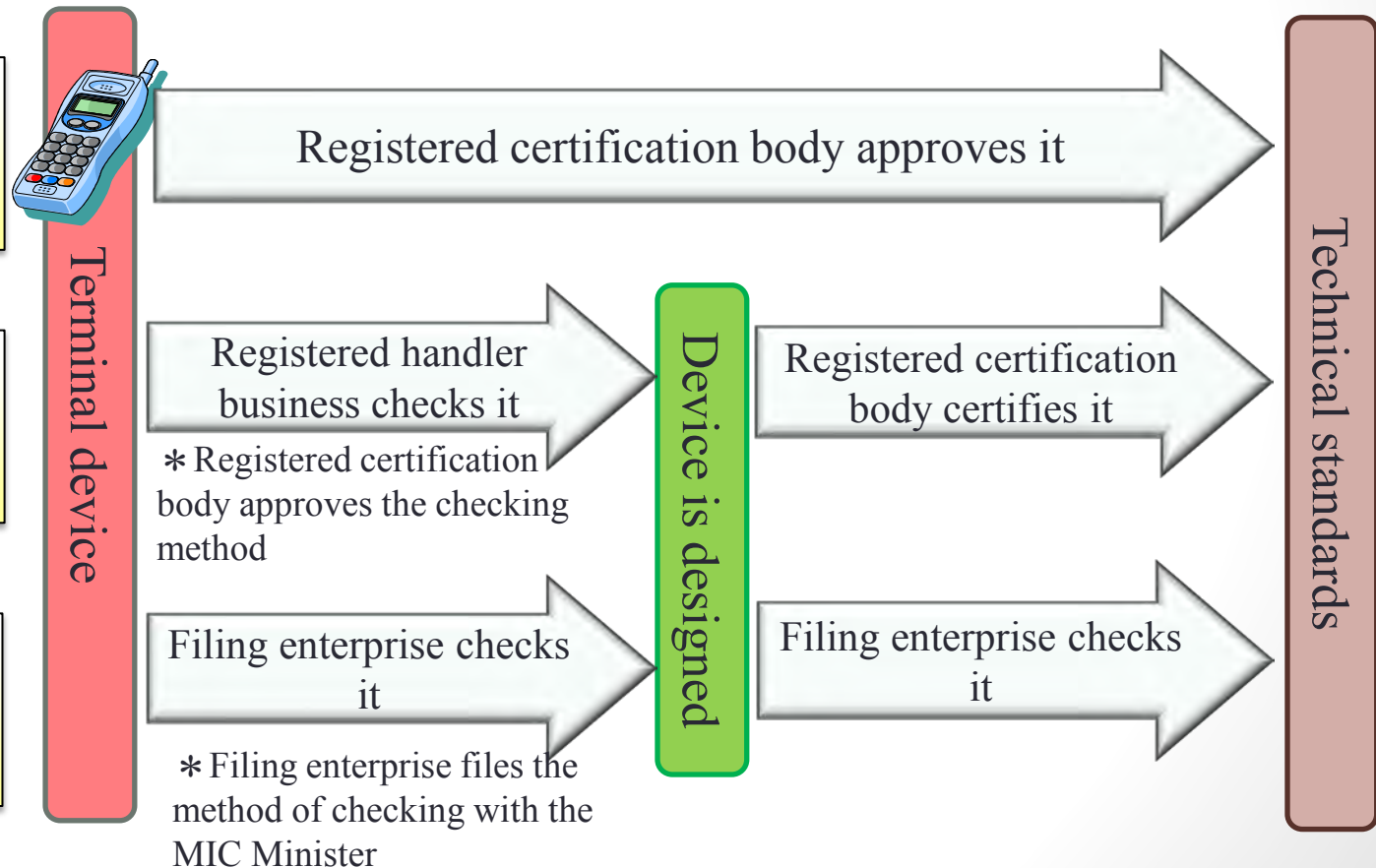
① Technical Standards Compatibility Certification (Article 53 Section 1)

(Certify the design)

② Design certification by registered certification body (Article 56)

(Check the design)

③ Self-check of satisfaction of technical standards by importer or manufacturer (Article 63)



Certification system on telecommunication terminals (3)

Method to check satisfaction of technical standards

(Certification by each device)

① Technical standards compatibility certification by registered certification body (Article 53 Section 1)

(Certify design)

② Design certification by registered certification body (Article 56)

(Check design)

③ Self-check of satisfaction of technical standards by importer or manufacturer (Article 63)

Compatible with technical standards

Performance

Design alignment duty

Duty to create and retain inspection records



Duty to display

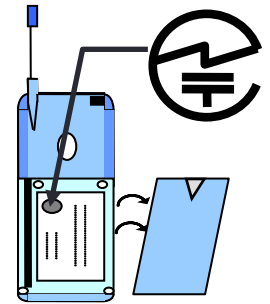
Effect of display

Display by registered certification body's duty (Article 53 Section 2)

Display by certifying vendor is possible (Article 58)

Display by filing vendor is possible (Article 65)

With display



No need to get inspected by telecomm vendor on connectivity (Article 69 Section 1)

- Users of terminal devices checks compatibility with technical standards via (1)~(3) below, and devices given a display do not need to receive inspection on connectivity by a telecomm vendor before connecting to datalines.

Standards certification system on telecomm devices (4)

Case on required documentation for certification and approval

1 **Device overview document**

Material that explains name, usage, structure, functions, and overview of specifications of a device.

2 **Prototype device result report** (when test by registered certification body is not done)

Materials describing compatibility with technical conditions and technical standards which also contains the following compatibility test results

(1) Measuring devices that were calibrated in accordance with Telecommunication Business Act (Article 87 Section 1 Paragraph 2)

(2) Tests conducted by a test method that is indicated by MIC Minister for each technical standard or a similar better method.

3 **External diagram**

Diagram that describes the dimension, appearance, and structure of the device.

4 **Connections schematic**

Diagram that describes the connections structure of each functional block for each circuit structure for the device, and diagram that describes the method of connecting datalines to this terminal device which is connected to other devices.

5 **Block diagram**

Diagram that describes the structure of the circuit in the device.

6 **Operation manual**

Material that explains the method of operation and handling the device.

7 **Document on method of checking** (Material needed when requests are made concerning design certification of a terminal device)

Material that records the method to check that all terminal devices based on the relevant design do match the relevant design (Certification Rule, Appendix No 3)

Item to describe in the check method document (Certification rules, appendix no 3)

Materials explaining the following items that must be explained.

1 Authority and responsibility of a manager and the organization

2 Management method to perform the duty to align with the design.

3 Inspection of terminal devices

4 Management of measuring devices

5 Materials needed to perform the duty to align with the design.

Overview of Mutual Recognition Agreement (MRA) with other countries

What is MRA?

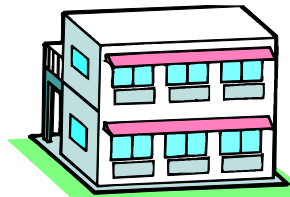
- Mutual Recognition Agreement (MRA): System to accept mutually between Japan and another country the results of evaluating compatibility with technical standards of a telecomm device.
- With regard to telecomm devices to date, MRA was signed and operating with Europe (effective Jan 2002), Singapore (effective Nov 2002), and with the US (effective Jan 2008).

Before MRA

【Japan】

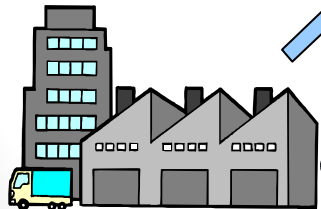
When device for overseas will be exported, one needs to go overseas and apply.
(requires time and cost)

【Outside Japan】



Compatibility evaluation body

① Application



Manufacturers

② Compatibility evaluation

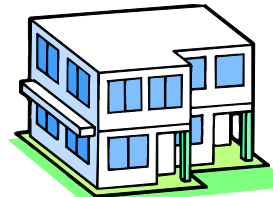


Market overseas

③ Export

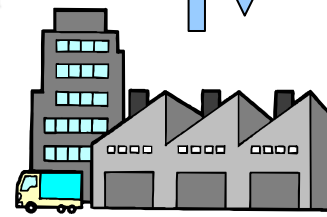
After MRA

【Japan】



Compatibility evaluation body

① Application



Manufacturers

② Compatibility evaluation
Overseas standards are inspected in Japan



③ Export

【Outside Japan】

Application overseas becomes doable from Japan
Cutting cost and timeframe



Market overseas

2. Laws and ministerial orders on certification system of telecommunication terminals

Laws and ministerial orders on telecommunication devices

- These are established in the rules on certification of technical standards compatibility of terminal devices and rules on terminals in the Telecommunication Business Act and related laws and ministerial ordinances.

Telecommunication Business Act

Chapter 1 General rules (Articles 1 to 5)

Chapter 2 Telecommunication Business (Articles 6 to 116)

Section 4 Telecommunication facilities (Articles 41 to 73)

Part 2 Connection to terminal facilities (Article 52)

(Article 53 to 73)

Part 5 Designated testing bodies (Articles 74 to 105)

Part 2 Registered certification body (Articles 86 to 103)

Part 3 Certification approving body (Articles 104 to 105)

Chapter 3 Use of land (Articles 117 to 143)

Chapter 4 Telecommunication Dispute Resolution Committee (Articles 144 to 162)

Chapter 5 Other rules (Articles 163 to 176)

Chapter 6 Penalty (Articles 177 to 193)

Related laws and ministerial ordinances to the Telecommunication Business Act

Rules on terminals (technical standards)

- ① General rules
- ② Categories of responsibility
- ③ Safety
- ④ Terminals connected to telephone facilities
- ⑤ Terminals connect to wireless calling facilities
- ⑥ Terminals connected to general digital communication facilities
- ⑦ Terminals connected to dedicated data lines or to digital data transmission facilities

Rules on certification of device terminals for compatibility to technical standards

- ① General rules
- ② Terminals to be certified for compatibility to technical standards
- ③ Design certification and certification of compatibility with technical standards which are conducted by a registered certification body (Inspection items, display format, and items in various filings)

Overview of provisions of the standards certification system

The following items are mainly set forth in the provisions in the standards certification system of the Telecommunication Business Act.

Articles of the Telecommunication Business Act	Description
Articles 53	Duty to display when technical standards compatibility certification is done Prohibiting unclear displays
Articles 54, 55, 60, 166, 167	Authority of the MIC Minister with respect to certification vendors (order to prevent interference, prohibiting a display, collecting reports, onsite inspection)
Articles 56 to 59	Duty of certification vendors and explanation of design certification (Design satisfaction duty and retention of test records, etc)
Article 61	Application of this mutatis mutandis to terminal devices whose design was certified and to certification vendors
Article 62	Application of this mutatis mutandis to non-Japanese vendors.
Articles 86 to 90	Technical standards compatibility self-check system
Articles 97 to 102	Criteria on registering registered certification bodies
Articles 91 to 96	Duties of a registered certification body
Articles 97 to 102	Authority of the MIC Minister with respect to registered certification bodies (Onsite inspection, rectification orders, etc)
Articles 103	How it is applied mutatis mutandis when the registered certification body will certify the design.
Articles 104 and 105	Certification approving body

Provisions applied to registered certification bodies and their description

The following provisions are applied to registered certification bodies that are registered under the Telecommunication Business Act

Articles of the Telecommunication Business Act	Description
Article 53 Section 1	Inspection of technical standards compatibility certification
Article 53 Section 2	Duty to display when technical standards compatibility gets certified
Article 86	Business categories into which certified body can register itself and items to complete in the application
Article 87	Standards on registration with MIC and items on disqualification
Article 88	Updating your registration (5 years)
Article 90	Filing when names are changed and announcement to the public of bodies that were registered
Article 91 Section 1	Duty to perform inspections of technical standards compatibility without delay.
Article 91 Section 2	Inspection method (This is set forth under “ Rules on technical standards compatibility certification for terminal devices ”) Standards on certifying professionals.
Article 92	Report to MIC on certified devices
Article 93	Filing that is done when directors are appointed or released
Article 94	Creation of business rules
Article 95 and 96	How to keep financial books and statements
Article 97 and 98	Instruction of MIC to certification bodies
Article 99	Filing that is done when business will stop or be dissolved.
Article 100 and 101	Standards on cancellation of registration and removal of registration by MIC
Article 103	Mutatis mutandis application of other rules
Article 166 Section 5	Onsite inspection by MIC of the certification body

Provisions applied to certified parties and description

The following provisions under the Telecommunication Business Act are applied under the MRA or by Japan's certifying body to non-Japanese parties overseas that are certified by a certifying body that does certification work for Japan

Provisions of the Telecommunication Business Act	Description
Article 54	Order to prevent interruption
Article 55 Section 1	When construal is made that no display is attached
Article 57 Section 1	Duty of alignment with design
Article 57 Section 2	Duty to retain inspection records
Article 58	Display rules
Article 59	Measures and orders
Article 60 Section 1	Prohibiting a display
Article 61	Mutatis mutandis application (when construal is made that no display is attached, order to prevent interruption)
Article 62 Sections 2 and 3, Article 167 Section 6	Non-Japanese vendor (Submit terminal device, order to prevent interruption, order to take action, prohibiting a display)
Article 166 Sections 2 and 3	Onsite inspection and collect report
Article 167 Section 1	Submit terminal devices

Duty to retain inspection records and duty to align with the design

■ Duty to align with the design 【Telecommunication Business Act Article 57 Section 1】

Person who is certified by a certification body (the certified vendor) has a duty to align the terminal device to the design when it will handle the terminal device that was created based on a design that was certified.

■ Duty to retain inspection records 【Telecommunication Business Act Article 57 Section 2】

■ Certified vendor shall inspect terminal devices that it will handle, create inspection logs on it, and retain them, in accordance with the Method of Checks (method on quality control) that is certified, in order to perform the above duty.

■ Inspection record items are as follows and they shall **be kept for 10 years from the date of inspection**

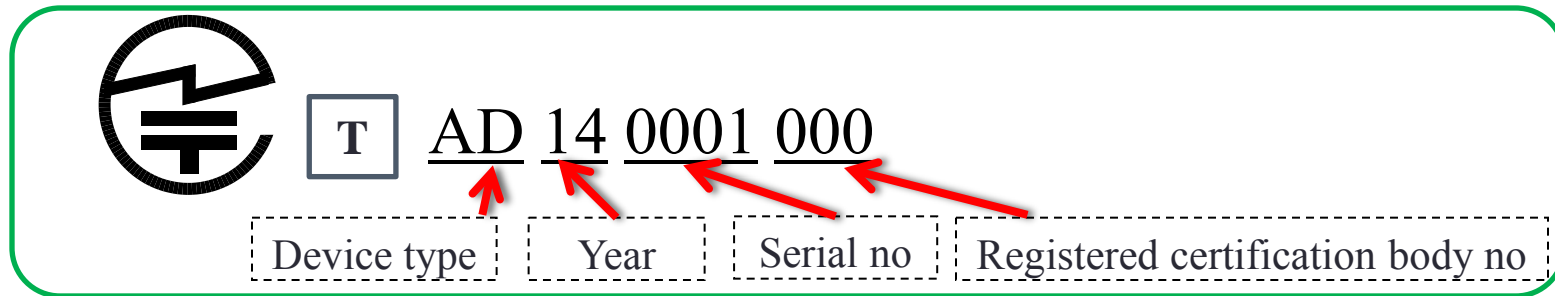
【Article 21 of the rules on technical standards compatibility certification of terminal devices】

- ① **Design certification number tied to the inspection**
- ② **Date and location of inspection**
- ③ **Name of person responsible for inspection**
- ④ **Inspection method**
- ⑤ **Inspection result**

Display to indicate devices that are certified

Display [Telecommunication Business Act Article 58]

- Certified vendors can attach a display to say that it satisfies the standards on its devices when **the duty to align with the design and duty to retain inspection records** are performed.
- **Display format [Rule on technical standards compatibility certification of devices, format no 7]**



- Display must be put in a readable spot or be displayable by an electromagnetic method.
[Rule on technical standards compatibility certification of devices, Article 22]
- For devices that has no area to show the Mark, you can attach it in a readable spot on the packaging or vessel or in the user's manual. [Rule on technical standards compatibility certification of devices, Article 22](Enacted 9/1/2014)
- Devices to which a display is attached in accordance with procedure will be given the specific effect under law as described.
(Effect: Connection to a telecommunication network)

* Handling of the Mark when the device is modified

- As a rule, certified vendors shall obtain **a new certification** from the certifying body when it changes a part or all of the design specifics of a device.
- When a new certification is obtained, you **will get a new number.**

Display by electromagnetic method (enacted 2.28.2010)

- The display to indicate that it meets the technical standards which used to be attached to an area that is easy to see on the terminal device (called “the Mark”) can **be recorded electromagnetically on device terminals with a screen and shall be displayed on the screen.** (electronic labeling)

Issues with this Mark

- Cell phone handsets have the certification display that it meets relevant technical standards (Mark, Bluetooth logo, etc) in the space that holds the battery pack.
- **Lack of space to put the mark** due to rapid advances in miniaturization, multifunctionality, and increased complexity of all telecommunication devices including cell phone handsets.



Inclusion of a display by using an electromagnetic method

- **Lack of space to attach the Mark is resolved** by introduction of a method that uses an electromagnetic method.
- **Easier to check the display than right now where the Mark is attached.**

<< Electromagnetic display examples that meet technical standards

① Operation examples



② Display examples



Partial amendment to rules on technical standards compatibility certification for terminal devices (Enacted 9/1/2004)

1 Transfer of display that indicates technical standards compatibility

(Transfer of display on compatible display terminal device that is inside a product)

- Manufacturer of a product that is in a wireless module that was certified on technical standards compatibility can transfer the display of technical standards compatibility that is attached to this wireless module onto another product. (Telecommunication Business Act, Article 68 Section 2)

→ User can now check the state of compatibility to technical standards from outside of a product and can use the product therefore with piece of mind.

* Display of technical standards compatibility certification

Terminal device display to tell you that this is compatible with the technical standards (connectivity with networks) as set forth by the Telecommunication Business Act. Requirements to be exempted from inspection when the terminal device is connected to a network of a telecomm vendor.



Wireless modules and PC mounted with wireless modules

*The following is set forth in the ministerial ordinance.

○ When the display will be put in a product with a compatible display terminal device, after one check that it is attached to the compatible display terminal device that is in the product by visual check or other appropriate method provided hereunder:

① Method of attaching it to a place that is visible on the product that has the compatible display terminal device built in.

② Method to display electronically the product into which the compatible display terminal device is built in. In this case, the user's manual shall describe that the display is electronic and the method of display.

Collection of report and order for onsite inspection and interference

Onsite inspection at certified vendor [Telecommunication Business Act, Article 166 Section 2 and 3]

- The MIC Minister may make the certified vendor report on the terminal device that was certified, or make its staff perform a onsite inspection of the offices of the certified vendor to inspect the device and other properties, in order to perform this law.
- If you refuse to report or file a false report, you may be penalized to a maximum of 300,000 Yen.

Submission of terminal device [Telecommunication Business Act, Article 167]

- After an onsite inspection by MIC staff, the MIC Minister order the certified vendor to submit the relevant device or relevant property by a particular time when there is a device that is found to be very difficult to inspect at the location where it is, or there is a property that is needed in particular to perform the inspection of the relevant device.
- If you violate the order, you may be penalized to a maximum of 300,000 Yen.

Order to prevent interference [Telecommunication Business Act, Article 54]

- When a terminal device that was certified is not given a display and is not compatible with the technical standards, and **there is a concern that the usage of this device may create interference on telecommunication of other users who will use the datalines,** and when the MIC feels a particular need to **prevent the aggravation of this interference, the MIC Minister may order the certified vendor to perform necessary actions to prevent the aggravation of the interference by this device.** ■ If this order is violated, there will be a maximum sentence of 1 year or a penalty of a maximum of 1 million Yen. And a corporation penalty in addition of maximum 100 million Yen.

3. Technical standards for telecommunication device terminals

Application of technical standards to telecommunication terminal devices

Under the Telecommunication Business Act, there are technical standards for terminal devices connecting to datalines that they will not create problems for other users or damage the dataline facilities. Even if the terminal device is one that connects to dataline facilities via radio wave, there is a need to satisfy the technical standards under the Telecommunication Business Act in addition to the Radio Acts.

Primary telecommunication method to connect to dataline facilities via radio waves

- TDMA
- CDMA
- W-CDMA
- CDMA2000

- VoLTE

- W-CDMA (HSPA)
- CDMA2000 (1xEV-DO)
- LTE
- WiFi
- WiMAX
- XGP

Type of telecommunication terminal device under the Telecommunication Business Act and signal

Type of terminal devices	Signal
Terminal devices connected to mobile telephone facilities and analog telephone facilities.	A
Terminal device that is connected to IP telephone facilities	E
Terminal devices that are connected to IP cell phone facilities.	F
Terminal devices that are connected to wireless calling facilities	B
Terminal devices that are connected to general digital telecommunication facilities.	C
Terminal devices that are connected to digital data transmission facilities and dedicate datalines.	D

History of categories of technical standards compatibility certification

~H23 (2011).3.31

Initially 4 categories

H23 (2011).4.1

IP telephone (category [E] added)



H25 (2013).3.28

IP mobile telephone (category [F] added)

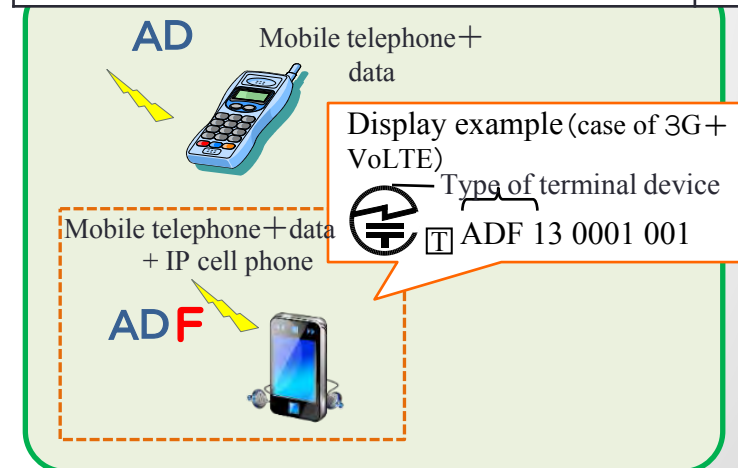
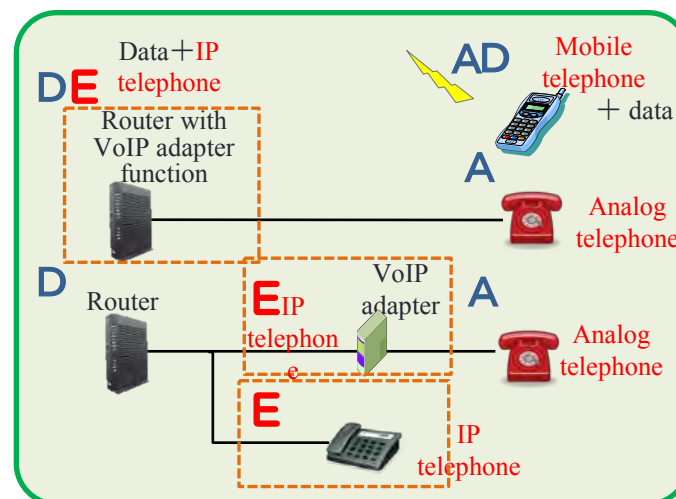
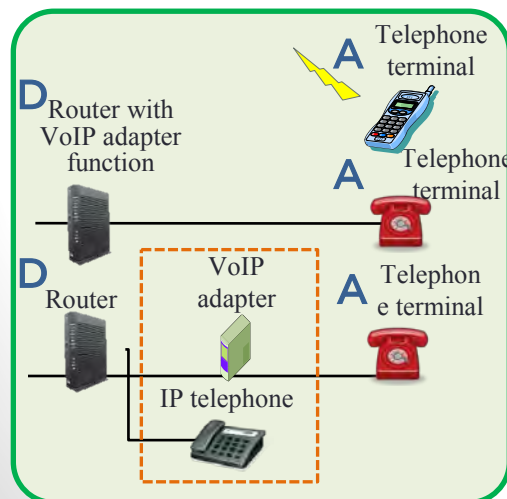


emergency notification function

Type of terminal device	Signal
Terminal device connected to telephone facility	A
Terminal device connected to wireless calling facility	B
Terminal device connected to general digital telecommunication facility	C
Terminal device connected to dedicated dataline facility or digital data transmission facility	D

Type of terminal device	Signal
Terminal device connected to analog telephone facility or mobile telephone facility	A
Terminal device connected to internet protocol telephone facility	E
Terminal device connected to wireless calling facility	B
Terminal device connected to general digital telecommunication facility	C
Terminal device connected to dedicated dataline facility or digital data transmission facility	D

Type of terminal device	Signal
Terminal device connected to analog telephone facility or mobile telephone facility	A
Terminal device connect to internet protocol telephone facility	E
Terminal device connected to internet protocol telephone facility	F
Terminal device connected to wireless calling facility	B
Terminal device connected to general digital telecommunication facility	C
Terminal device connected to dedicated dataline facility or digital data transmission facility	D



※The types of terminal devices in the figure are abbreviated because of the column space.

Description of rules on technical standards in the terminal facility rules ①

(General standards sought by terminal facilities)

Chapter 1 General rules (Articles 1 and 2)

Chapter 2 Category of responsibilities (Article 3)

Chapter 3 Safety (Articles 4 to 9)

(Rules on individual terminal facilities)

Chapter 4 Terminal facility to connect to telephone facility

Section 1 Analog telephone terminals (Article 10 to 16)

Section 2 Cell phone handset (Articles 27 to 32)

Section 3 IP telephone terminal
(Article 32-2 to Article 32-9)

Section 4 IP cell phone terminal

Chapter 5 Terminal facility that is connected to the wireless calling facility (Articles 33 and 34)

Chapter 6 Terminal facility connected to general digital telecommunication facility (Articles 34-2 to 34-7)

Chapter 7 Terminal facility connect to dedicated facility or data telecommunication facility (Article 34-8 to Article 34-9)
* It is included in the LTE data communication too

Chapter 8 Special terminal facility (Article 35)

(Other)

Chapter 9 Self regulated telecommunication facility (Article 36)

Specific examples of terminal devices and technical standards

Safety

•Prohibit classification of telecommunication that will leak•Wiring•Terminal facility that use radio waves at the terminal facility

Analog telephone

•Basic function•Outward transmission function•Conditions on signal selection•Emergency notification function•Electrical conditions on direct current circuits•Transmission power•Crosstalk attenuation

Mobile telephone (telephone), PHS

•Basic function•Outward transmission function•Outward transmission timing•Random access control•Position registration control•Function to follow channel switching instruction•Function to stop outward transmission•Function to stop outward transmission automatically when inward transmission level deteriorates•Function to stop outward transmission automatically when there is breakdown•Function to secure important communications•Emergency notification function•Function to prevent changes to information unique to mobile telephone terminal

IP telephone (0AB-J)

•Basic functions•Outward transmission function•Identification information registration•[Illeg] notification function•Emergency notification function•Electrical conditions•Transmission power when communicating with analog telephone terminals

VoLTE

•Basic function • Outward transmission function • Outward transmission timing • Random access control • Position registration control • Function to follow channel switching instruction • Function to stop outward transmission • Function to stop outward transmission automatically when inward transmission level deteriorates • Function to stop outward transmission automatically when there is breakdown • Function to secure important communications • Emergency notification function • Function to prevent changes to information unique to IP cell phone terminal

ISDN terminal

•Basic function•Outward transmission function•Emergency notification condition•Electrical conditions•Transmission power when communication with analog telephone terminals

Mobile telephone(data communication), router

•Electrical conditions•Crosstalk attenuation

Description of rules on technical standards in the terminals rules

Rules on terminals	Analog telephone	Mobile telephone	IP telephone	IP mobile telephone (eg VoLTE)	Wireless calling	ISDN	Data
Basic functions	Article 10	Article 17	Article 32-2	Article 32-10	—	Article 34-2	—
Outward transmission functions	Article 11	Article 18	Article 32-3	Article 32-11	—	Article 34-3	—
Conditions on selecting signals	Article 12	—	—	—	—	—	—
Outward transmission timing	—	Article 19	—	Article 32-12	—	—	—
Random access control	—	Article 20	—	Article 32-13	—	—	—
Time alignment control	—	Article 21	—	Article 32-14	—	—	—
Location registration control	—	Article 22	—	Article 32-15	—	—	—
Function that follows channel switching instructions	—	Article 23	—	Article 32-16	—	—	—
Inward transmission level notification function	—	Article 24	—	Article 32-17	—	—	—
Function to follow outward transmission stop instruction	—	Article 25	—	Article 32-18	—	—	—
Automated outward transmission stop function when inward transmission level falls, etc	—	Article 26	—	Article 32-19	—	—	—
Automated outward transmission stop function when broken	—	Article 27	—	Article 32-20	—	—	—
Identification information registration	—	—	Article 32-4	—	—	—	—
[Illeg] notification function	—	—	Article 32-5	Article 32-22	—	—	—
Important transmission confirmation	—	Article 28	—	Article 32-21	—	—	—
Emergency notification function	Article 12-2	Article 28-2	Article 32-6	Article 32-23	—	Article 34-4	—
Prevent change to information unique to terminal	—	Article 29	—	Article 32-24	Article 33	—	—
Electrical conditions	Article 13	—	Article 32-7	—	—	—	Article 34-8
Transmission power	Article 14	Article 30	Article 32-8	—	—	Article 34-6	—
Crosstalk attenuation	Article 15	Article 31	—	—	—	—	Article 34-9
Special terminals	Article 16	Article 32	Article 32-9	Article 32-25	Article 34	Article 34-7	—

Added emergency notification function

Connect to IP telephones

Added IP mobile
telephone terminal

Reference: Types of terminal devices that were added or changed

- **DECT, s PHS [digital cordless telephone standards] (Oct 2010 ~)**

Conditions and functions to have

- Identification number, carrier sense

- **Dedicated dataline facilities: 1000BASE-T (Apr 2011~)**

Conditions and functions to have

- Outward transmission voltage

- **Dedicated dataline facilities: XGP (Jul 2011~)**

Amended conditions and functions

- Outward transmission timing •Random access control •Incoming transmission level notification function

- **920MHz band electronic tag system (Dec 2011~)**

Conditions and functions to have

- Identification number, carrier sense

- **Next generation high speed wireless LAN (Mar 2013~)**

Conditions and functions to have

- Identification number, carrier sense

Certifications by year of terminal devices

Of the 1193 models that were certified by a registered certification body in fiscal 2013,

- 1032 terminal devices (category D) that are connected to digital data transmission facilities and dedicated dataline facilities.

- 412 terminal devices (category A) that are connected to mobile telephone facilities and analog telephone facilities.

* Categories may overlap

Fiscal year		H16	H17	H18	H19	H20	H21	H22	H23	H24	H25	H26 (~Nov)
Registered certification body		1029	959	942	986	1078	931	869	909	874	1006	582
Self-check		49	59	33	25	17	9	7	24	14	14	7
MRA	EU	11	22	41	32	29	23	67	78	81	170	110
	USA	-	-	-	-	-	-	-	5	2	3	7
Total		1089	1040	1016	1043	1124	963	943	1016	971	1193	706

4. Market surveillance on terminal devices

About the terminal device market surveillance

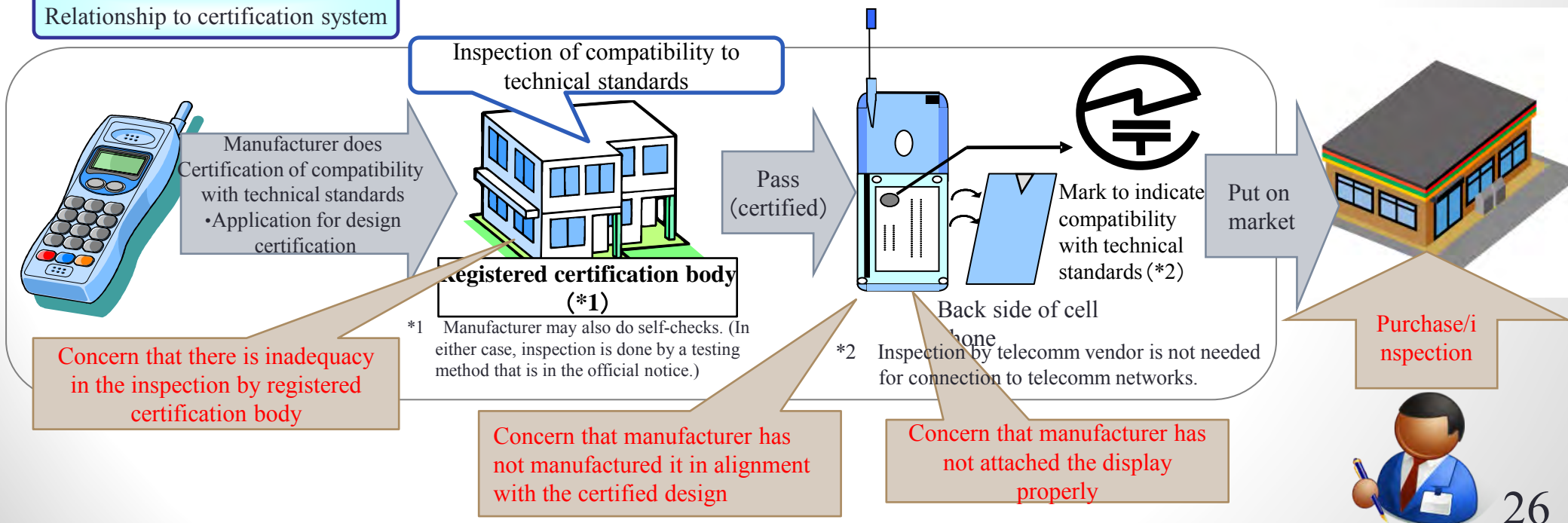
- Surveillance is done to inspect for compatibility by purchasing terminal devices on the market to check to see for compatibility to technical standards that are set forth in the Telecommunication Business Act with regard to terminal devices on the market.
- This investigation is performed every year to check whether relevant bodies and terminal manufacturers are following the laws and ministerial ordinances, because the inspection of technical standards compatibility inspection on terminal devices are done by bodies that are registered with the government.

Investigated content

- Check display (Mark of compatibility with technical standards)
- Compatibility with common standards of terminal devices (prohibit identification of communication that leaks, insulation resistance, wirings, etc.)
- Compatibility with standards set forth by type (analog telephone, cell phone, IP telephone, data communication)

* Select so there is no bias on registered certification body or type of terminal device

Relationship to certification system



Performance of market surveillance and post-market regulations

- MIC will perform onsite inspections at registered certification bodies to see whether certification steps are done correctly.
- Actions ex post facto are in place, which include* order to rectify in case of violation of law and ministerial ordinance, and orders such as implementation of necessary measures to prevent aggravation of damages and order to prohibit certain displays.
- As part of market survey, MIC shall, via checking the devices, investigate and monitor telecommunication terminals that are improperly certified.

(*Telecommunication Business Act, Articles 54, 66, and 68)

Market study (Started in 2003)

- MIC makes random purchases of devices



- Test to find out whether there is a match to the technical standards



- If inappropriate device is discovered, instruct supplier (manufacturer or importer) to correct the situation.

Primary measures for not satisfying the display and technical standards

Measures and orders

Minister may order the certified vendor that necessary measures to be taken to improve the method to check as it relates to certification when the certified vendor is found to have violated the duty to align with the design. [Business Telecommunication Act Article 59]

Action to deem that no display was attached

When there is no satisfaction with the technical standards by the certified device onto which the display is attached, the MIC Minister may take action that this device has not been attached a display that tells that there is compatibility to the technical standards when MIC sees that there is a particular need to prevent interferences on telecommunication of other users who will use the telecommunication datalines. [Business Telecommunication Act Article 55 Section 1]

Action when display is prohibited

The MIC Minister may order the certified vendor that attachment of a display on the device be prohibited for a period not more than 2 years in the event any of the conditions below are applicable. [Business Telecommunication Act Article 60 Section 1]

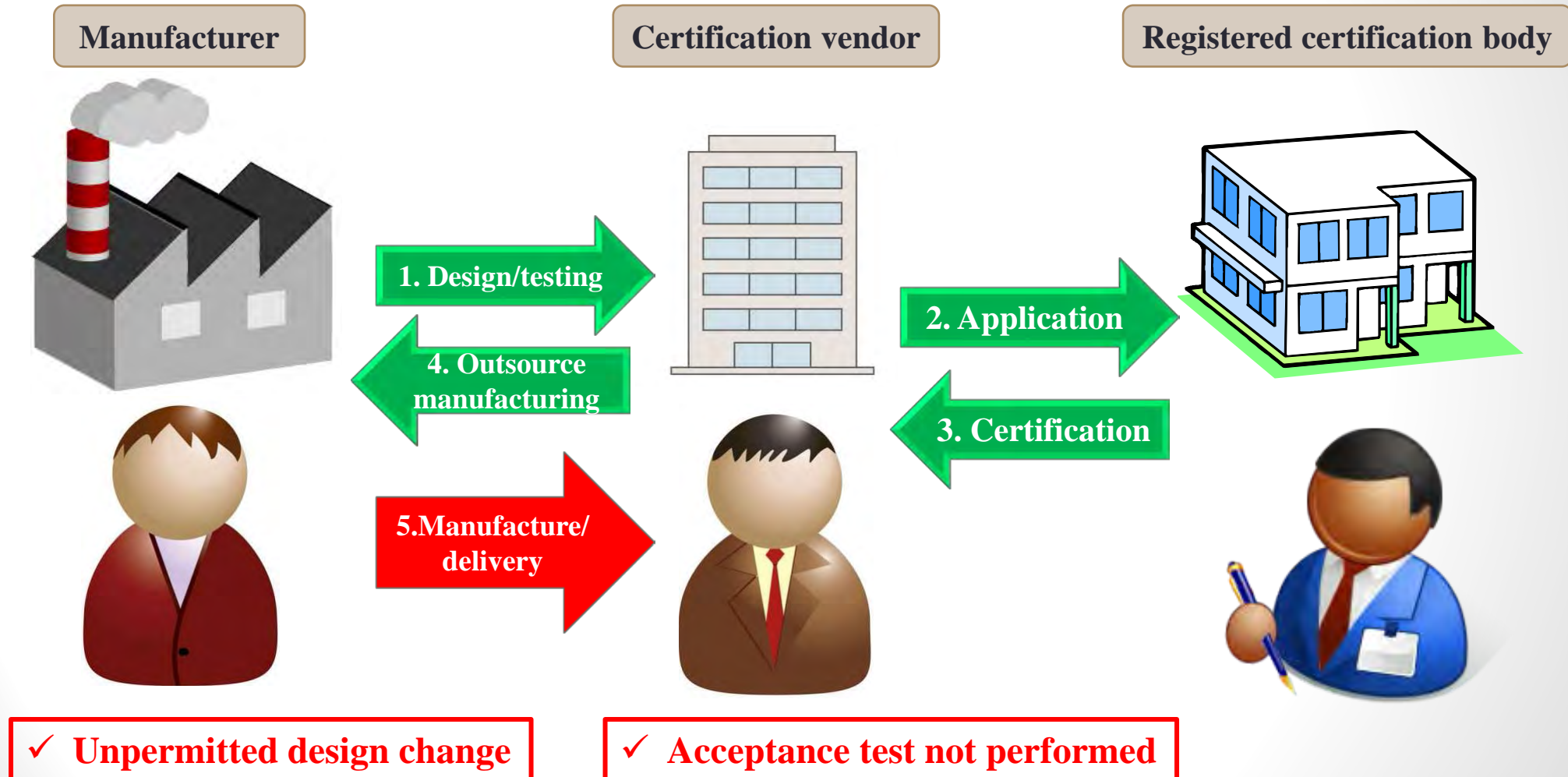
- ① When devices according to the design are not compatible with the technical standards under the Telecommunication Business Act, it is found that there is a particular need to prevent interferences on the communication of other users who use the datalines. (exclude (6))
- ② When there is a violation by the certified vendor of the duty to record and inspect
- ③ When there is a violation by the certified vendor of the order to take some measures
- ④ When the certified vendor receives the certification by improper means.
- ⑤ When a registered certification body certifies in violation of a duty.
- ⑥ When a technical standard is modified, and it is found that the design that was certified is no longer compatible with the technical standards after its modification to the design.

- The MIC Minister will notify via public notice when it prohibits a display to be attached or it takes action by deeming that no display was attached.

[Telecommunication Business Act, Article 55, Section 2; Article 60 Section 2; and Article 24 of the rule on technical standards compatibility certification of terminal devices]

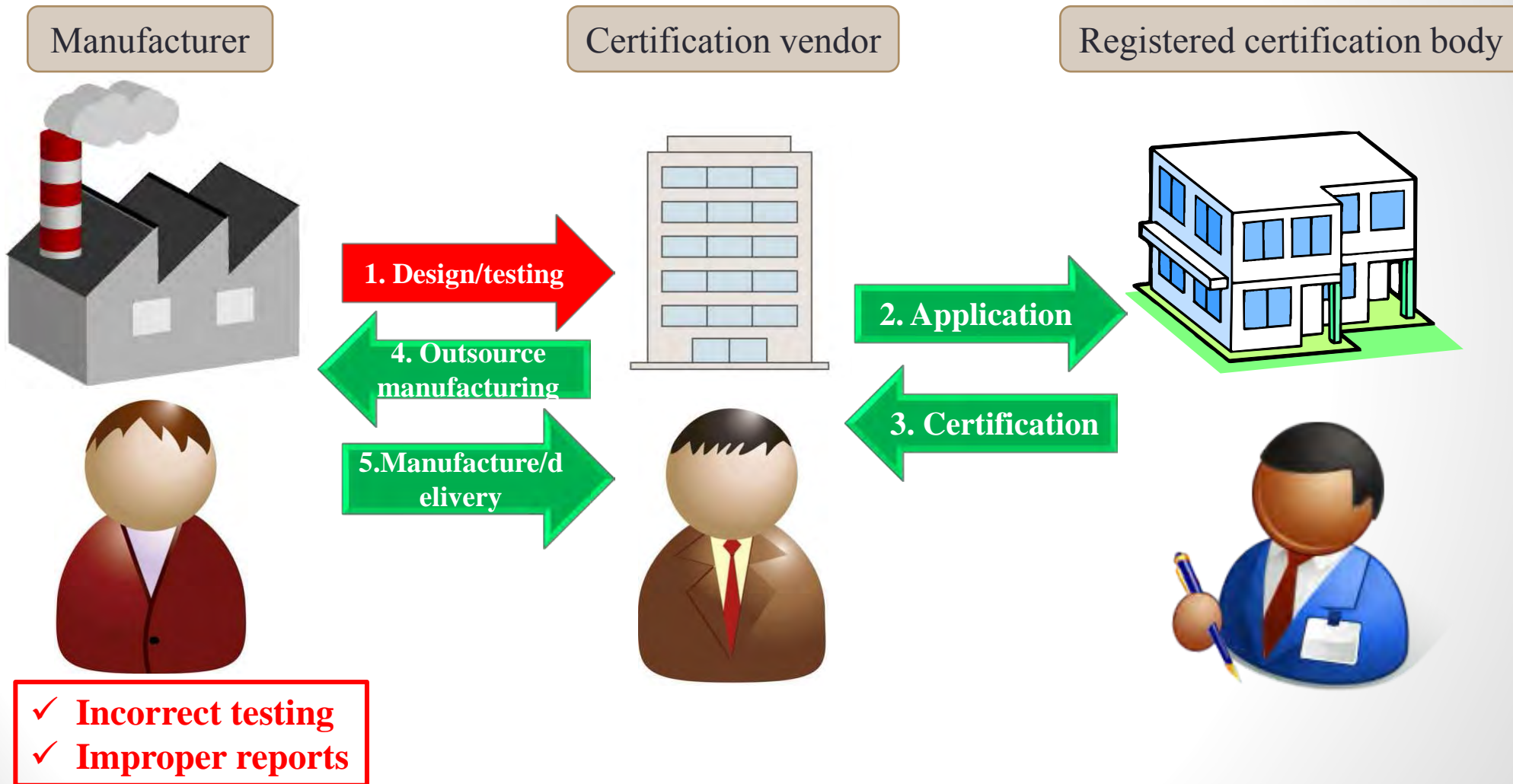
Violation of design matching duty

- The manufacturer that is a contractor of the certification vendor **manufactured a terminal device that was different from the design** that was certified.
- Because the certification vendor did not perform an acceptance test, **nobody noticed the design change**.



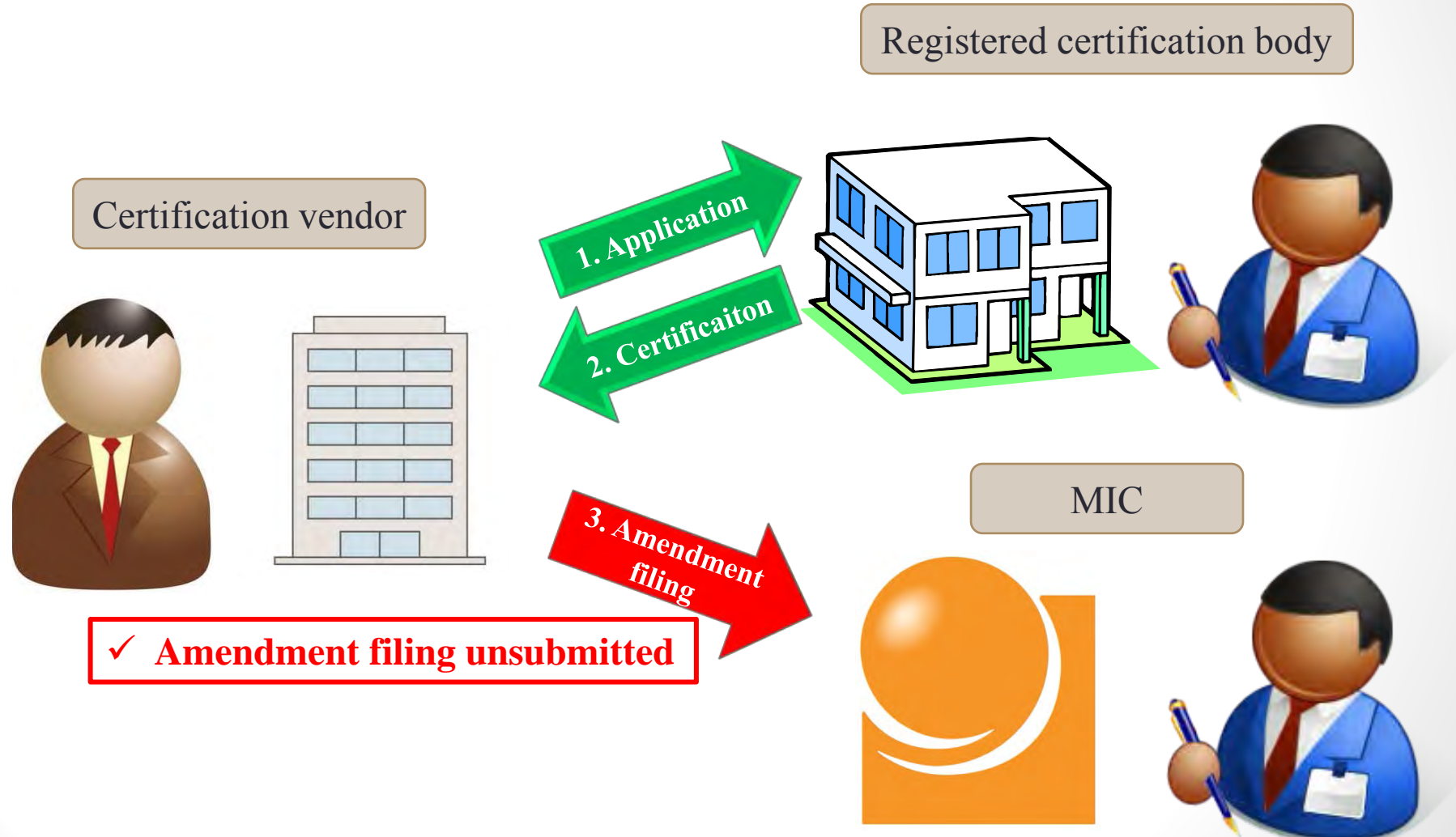
Inappropriate certification

- As a result of the manufacturer creating an **improper test report** and tests by incorrect methods, nobody noticed the incompatibility to the technical standards and the certification was completed.



Names that are different from the time of certification

- Despite the certification vendor obtained certification on the **device for development** and changed the name of the device for sale, **no amendment filing on the name was submitted.**



【Case of incompatibility with terminal devices】

http://www.soumu.go.jp/main_sosiki/joho_tsusin/tanmatu/futekigou.html

**総務省**
Ministry of Internal Affairs
and Communications

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電気通信機器の基準認証制度における技術基準への不適合等の事例について

携帯電話や無線LANといった端末機器市場の多様化や機能の複雑化に伴い、端末機器に関して電気通信事業法等の法令に定められている表示(いわゆる「技適マーク」)の不備、技術基準への不適合、検査記録等の作成及び保存が行われていない等の電気通信機器の基準認証制度に係る不適合等(以下「技術基準への不適合等」)の事例が最近発生しています。そこで総務省では、本ホームページにおいて、当省で把握した技術基準への不適合等の事例を公表し、利用者や関係機関等への周知を行うことにより、被害の拡大や同様な事例の再発防止に努めています。

また、総務省が行っている実際に市場で販売されている電気通信機器を対象としたサンプル調査において確認された不適合等の事例についても、本ホームページ等を通じて随時情報提供していく予定です。

(1) 技術基準への不適合等について

我が国の電気通信機器の基準認証制度における技適マークは、その設備が電気通信事業法等が定める技術基準に適合していることを証明するものですが、近年の技術基準への不適合等に当たる事例では、技術基準に適合していないにもかかわらず技適マークが貼付されている場合、認証の取得手続に問題がある場合、認証を取得した設計とは異なる端末機器を製造・販売している場合(表1)、この技適マークの貼付手続に問題がある場合、また、表示の内容が不適切な場合(表2)などが確認されています。

たとえ同じ型式の製品が総務省ホームページ上において設計認証を受けていることが確認できたとしても、法令の手続に則った技適マークが貼付されていない電気通信機器は、認証を受けた設計への合致が確認されておらず、技術基準に適合していない可能性があります。この場合、電気通信事業法に基づく検査・確認を受けた後でなければ、利用者は当該機器を接続・使用することはできません。

(2) 利用者へのお願い

本ホームページや製造業者等による情報提供などを通じ、利用している電気通信機器の技術基準への不適合等を確認した場合には、速やかに販売業者等に問い合わせ、その後の対応をご相談ください。

5. Incompatibility to technical standards for emergency notifications

- At the MRA international seminar in 2012, the following cautions were disseminated about the testing method for emergency notifications on cell phones.

JVLATE

電気通信端末機器試験事業者協議会

Japan Voluntary Laboratory Association for Telecommunications Equipment

Emergency Call of Mobile Phone

MIC International Workshop, 29 March 2012

Japan Voluntary Laboratory Association for
Telecommunications Equipment(JVLATE)

Nob Nakanishi, Chair



Method of transmission of emergency notifications from cell phones

- There are the following 2 types of transmission in emergency notifications from cell phones.
 - Normal setup (normal number transmission)
 - Emergency setup (includes emergency service category (police, coastguard, fire department, ambulance))
- In transmissions by emergency setup, cell phone has to read the emergency call code (ECC) inside the elementary file (EF) which is on the SIM and then transmit it.

Item	Police		Coastguard		Fire Dept / Ambulance	
	Value		Value		Value	
Emergency Call Code	1	1	1	1	1	1
	F	0	F	8	F	9
	F	F	F	F	F	F
Emergency Service Category	01		08		06	

Case of EF_{ECC} information in SIM
(5 types in Japan)

Method of testing for each transmission method

- In the test, the following items are checked by a base station simulator.
 - Normal setup : Check dialed number
 - Emergency setup : Check the service category

Byte	Bitstream	Identifier	Decimal	
		CcNumberLV		
56	00000011	Length		
		Numbering type & plan		
57	1-----	Extension bit		Ext
57	-000----	Numbering type	0	Unkn
57	----0001	Numbering plan	1	ISDN
58	00010001	BCD coded digit pairs[0]	1	
59	11110000	BCD coded digit pairs[1]	240	
		Call Control Capabilities (TLV)		
60	00010101	IEI		
61	00000010	Length		
62	0000----	Maximum Number Of Supported Bea		
62	----0---	Spare	0	
62	-----0--	Enhanced Network Initiated in-c		not
62	-----0-	Prolonged Clearing Procedure	0	not

Normal setup

Byte	Bitstream	Identifier	Decimal	
64	-----0-	FR AMR-WB	0	unave
64	-----0--	UMTS AMR-WB	0	unave
64	----0---	OHR AMR	0	unave
64	---0----	OFR AMB-WB	0	unave
64	--0-----	OHR AMR-WB	0	unave
64	00-----	Spare	0	
		Emergency category (TLV)		
65	00101110	IEI		
66	00000001	Length		
		ServiceCategory		
67	-----1	Police	1	on
67	-----0-	Ambulance	0	off
67	-----0--	Fire Brigade	0	off
67	----0---	Marine Guard	0	off
67	--0----	Mountain Rescue	0	off
67	000---	Spare	0	

Emergency setup

Overview of troubles and troubleshooting

○ Overview of technical standards incompatibilities

Mobile telephone that was incompatible with technical standard was a SIM free terminal, and of the 4 types of compatible SIMs, 2 were transmission by normal setup and other 2 were one that transmit by emergency setup.

Not connected to emergency body because the mobile handset did not read the service category from the emergency setup transmission.



○ What's done to resolve this incompatibility

Corrected firmware that reads the service category was released, which made even SIM that transmits via emergency setup to make emergency transmissions.

Given the recent incompatibility case, please run an appropriate emergency transmission test at the compatibility evaluation bodies that does certification and manufacturers that make similar SIM free cell phones.

Mobiles & smartphones are popular

There are households with no cell phones

Life or death

Announcements on the MIC website

【Certification system for terminal devices】

http://www.soumu.go.jp/main_sosiki/joho_tsusin/tanmatu/

- Certification system, related laws and ministerial ordinances
- List of registered bodies, list of terminals certified as technically compatible
- Case study of incompatibility

The screenshot shows the homepage of the Ministry of Internal Affairs and Communications (MIC). The header includes the MIC logo and name in Japanese and English. A navigation bar at the top lists various topics: 総務省 | 安全・信頼性の向上 | 端末機器に関する... | ページ(P) | セーフティ(S). A search bar with the text 'ここに検索語句を入力' and a '検索' button is present. Below the header, a breadcrumb trail reads: 総務省トップ > 政策 > 情報通信(ICT政策) > 電気通信政策の推進 > 安全・信頼性の向上 > 端末機器に関する基準認証制度について. The main content area is titled '端末機器に関する基準認証制度について' (About the Standard Certification System for Terminal Equipment). It includes a section '1. 概要' (Overview) which states that terminal equipment like telephones, FAX, and modems must be connected to the network of telecommunications carriers and comply with technical standards. It also mentions that registered bodies can certify equipment that meets these standards. A list of links on the left sidebar includes: ホーム, 端末機器に関する基準認証制度について, 基準認証関係法令, and 基準認証制度における技術基準への不適合等の事例. The bottom right corner of the page contains a list of technical standards and their implications for equipment compatibility.

総務省 | 安全・信頼性の向上 | 端末機器に関する... | ページ(P) | セーフティ(S)

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安全・信頼性の向上

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端末機器に関する基準認証制度について

1. 概要

電話機、FAX、モデム等の端末機器を電気通信事業者のネットワーク(電気通信回線設備)に接続し使用する場合、原則として利用者は、電気通信事業者の接続の検査を受け、当該端末機器が電気通信事業法に基づく技術基準※に適合していることを確認する必要があります。

ただし、登録認定機関から技術基準に適合していることの認定を受けるなどして総務省令で定める表示(技適マーク)が付された機器を接続する場合には、当該端末機器の利用者は、電気通信事業者による接続の検査を受けることなく接続し使用することができます(下図参照)。(電気通信事業法第69条)

※ 技術基準は、電気通信事業法第52条第2項の規定に基づき以下の事項が確保されるものとして、「端末設備等規則」において定められております。

- 一 電気通信回線設備を損傷し、又はその機能に障害を与えないようにすること。
- 二 電気通信回線設備を利用する他の利用者に迷惑を及ぼさないようにすること。
- 三 電気通信事業者の設置する電気通信回線設備と利用者の接続する端末設備との責任の分界が明確であるようにすること。

Thank you for your attention

●MIC Website

<http://www.soumu.go.jp/>

●MIC, Radio Frequency Usage Website

<http://www.tele.soumu.go.jp/index.htm>

